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ABSTRACT

Achievements and possible future projects of the American Economic Association's Committee on Economic Education (CEE), whose goal is to improve teaching in college and university economics, are discussed. The Teacher Training Program (TTP) was established by the CEE in the 1970's to develop programs to train economic educators. To date the project has developed a resource manual and conducted workshops for graduate students and training programs for 25 institutions. The CEE has also successfully emphasized the promotion of research on economic education. For example, economic research has benefited enormously from the development of a standardized test, the Test of Understanding College Economics, originally sponsored by CEE in 1968. A third CEE achievement was the co-funding with the Joint Council on Economic Education of the Journal of Economic Education, which publishes research reports on teaching. The focus of new projects which the CEE is considering includes computer-assisted instruction, the use of radio in teaching economics, learning theory and research as a foundation for teaching economics, increasing the supply of women as economics teachers, and cooperation with schools of education. (RM)

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Improving the Teaching of Economics: Achievements and Aspirations

By G. L. BACH AND ALLEN C. KELLEY*

Apparently somewhere between two-thirds and three-fourths of all economists make a significant part of their living by teaching. Yet only a minuscule part of their professional training is focused on how to become a good teacher. It is not clear that our teaching performance is much better now than it was twenty-five or fifty years ago.

The Committee on Economic Education (CEE) of the American Economic Association (AEA) has since the 1950's operated under a broad and challenging mandate—to help improve the teaching in college and university economics. The CEE played a major role in a big push to improve teaching at all levels during the 1960's. Activities included a National Task Force on Economic Education, comprised of six of the nation's most distinguished economists who were asked to suggest the economic essentials that each citizen-to-be should have in our democratic, largely market-directed economy; a year-long CBS and PBS economics course, including work for credit at many colleges and universities; a nationwide program of summer workshops for teachers; and a major push on research on the effectiveness of different kinds of teaching.

Several of these projects were established on a continuing basis. Others served their purposes and faded away. Thus, the CEE of the 1970's inherited a large agenda of work-

in-progress. But much as the CEE of the 1950-60's accomplished, there was much more to be done to improve the teaching of economics at all levels, and, in 1973, Bach as out-going chairman spelled out a challenge, "An Agenda for Improving the Teaching of Economics" for the next decade.

The new committee developed a wide-ranging program of continuing and new projects. The committee's activities have been "project oriented." These projects, with approximately one million dollars of foundation grants over the decade, will be discussed here around three broad themes: training economic educators, developing economic-education research, and establishment of the *Journal of Economic Education (JEE)*. We then conclude with a description of a number of projects being considered now by the committee, and some which we as individuals would like to see seriously considered.

I. The Training of Economic Educators

Achievements. The 1973 committee agenda placed heavy emphasis on producing more well-trained teachers in economics. The university incentive system was, and still is, stacked against students becoming distinguished teachers. Few major economics departments offered any training in how to teach. In a painful majority of cases, the new TA was simply put in the classroom with a copy of the textbook and good wishes. If the TA was so bad the students complained bitterly, he heard about it. But the positive rewards were for outstanding research, few for good teaching. Given these facts, the committee has repeatedly urged that departments take positive steps to improve the teaching abilities of new economists.

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In the 1970's, the committee established a major experimental Teacher Training Program (TTP) for new Ph.Ds and young teachers of economics. The thrust of the TTP was to develop a teacher training program, or model, that was fundamental yet flexible enough to be adaptable to many courses and school settings. Planning and Policy Committees were established to define the problem, to pull together what we know about good teaching and what techniques are most effective under different conditions, and to establish actual training programs for economists.¹

A decade later, the project has resulted in several conspicuous "outputs":

1) A *Resource Manual* was prepared, covering course planning, classroom behavior, lecturing, cases, leading discussion and other teaching styles, and examinations. Video tapes are used for teacher self-evaluation. The *Manual* provides the most reliable, validated information available on these questions. It also includes descriptions of actual training programs that range from one-day "crash" courses for TAs to full-semester courses given for graduate credit.

2) Several workshops have been held in which teams of graduate students and faculty members from leading Ph.D-granting universities have met for one to two weeks to learn how to use the *Manual* and supporting materials, and how to institute training programs at their own schools. These multi-school workshops have thus far been held at Indiana University-Bloomington, University of Wisconsin-Madison, University of North Carolina-Chapel Hill, Harvard University, and University of Colorado-Boulder. Over 300 graduate students and faculty members,

representing sixty colleges and universities, have participated.

3) In the past decade, one-school training programs have been conducted at twenty-five institutions, and approximately ten of these have instituted their own TTP on a regular basis. Roughly 1,000 graduate students have participated in these programs. Presently, training programs for new Ph.Ds and teachers are well established at Harvard, Indiana, Minnesota, North Carolina, and Wisconsin. Numerous others have mandated some formal program of teacher training.

Understandably, there has been considerable doubt that we know much about how students learn best, or what is the best way to teach. But psychologists have completed a vast amount of research on these issues. There is a large amount of empirical evidence, much of it carefully statistically tested, on how humans learn under different conditions. There is certainly no one "best" way to teach everything under all conditions. But there are some ways that are pretty surely better than others for inducing student learning under different conditions.

Aspirations. We judge that the teacher training program has been a substantial success. The number of schools involved, and graduate students and young teachers trained, has exceeded our expectations. But there is still much to be done. Expansion of programs is surely not the only way to improve teaching in economics. But it could do a lot. Over 1,000 new Ph.Ds and established faculty members have been helped by a TTP in the past five years. The CEE's aspiration is to at least double this number in the next five years. We note, incidentally, that the most effective results occurred when (a) junior and senior faculty members of the same school have participated in TTP workshops; this provides status and reinforcement for each other when such formal training in teaching may face cynicism on their home campus; and (b) where the TTP is an established, accepted part of faculty development. The CEE plans to continue support for new TTPs around the country. It is our aspiration that these programs become well-established parts of all major Ph.D programs, and of faculty development programs for other

¹The Planning Committee included Arthur Welsh (chair), W. Lee Hansen (chairman of the CEE), Allen C. Kelly, Darrell Lewis, and Phillip Saunders; the Policy Committee was G. L. Bach (chair), James Buchanan, Rendigs Fels, R. A. Gordon, Walter W. Heller, and George Stigler. Financial support was initially obtained from the Alfred P. Sloan Foundation and subsequently from the Lilly Endowment, Exxon Educational Foundation, JM Foundation, City Corporation, Joint Council on Economic Education, and several participating universities. Approximately one-half million dollars has been spent on this project.

young teachers. We especially hope to establish regional TTPs, where smaller, less well-financed schools can send their younger teachers at moderate cost. We are also experimenting with small "teams" of experienced TTP leaders that might help at the financially more limited schools.

II. Research on Economic Education

Achievements. The Committee on Economic Education has emphasized the promotion of research on economic education for three reasons. First, adding to the stock of knowledge about what determines success in teaching economics represents a direct assault on our primary goal of improving teaching. Second, the theoretical perspectives and empirical tools of the economics discipline appear peculiarly germane to the study of a process (learning) which involves the transformation of inputs into outputs. Third, professional respect and credibility in economics is largely related to scholarly activity. If economic education as a "field" of inquiry is to be fully established, it too must devote a substantial portion of its emphasis to research.

Expanding a research base is a slow process, but, happily, we can report some significant achievements. The quantity and quality of research on economic education and learning have steadily improved. Moreover, the results from this research are beginning to accumulate into useful, well-established generalizations about teaching and learning economics. "Hard" research involving explicit hypothesis testing has been replacing the "soft" casual empiricism of the past. Sessions reporting on economic education research are now commonplace at national and regional professional meetings. The research has benefited enormously from the development of a standardized test, the Test of Understanding College Economics (TUCE), originally sponsored by the Committee in 1963, and revised in 1981. This test is the most widely used measure of economic "outputs" in the various articles appearing the *JEE* and the *AEA Papers and Proceedings*.

A comprehensive review of economic education research since World War II was con-

ducted by John Siegfried and Rendigs Fels. Based on a review of 179 pieces of research, they concluded:

A cumulative literature on economics education has now developed.... The quality of the research done so far varies widely, but dramatic improvement has occurred in recent years; much more of the current research is first rate than was the case 15 years ago. ... The field [economic education] is rapidly becoming respectable, and the research findings can be useful to college economics teaching. [1979, p. 959]

Most research on economic education has focused on the principles course. In an effort to broaden this emphasis, the CEE has backed a census of all economics departments to determine the nature of the economics major in the United States. This ambitious project, led by John Siegfried, has just been completed, and the last of several published papers presenting this new, large data base is being given in this session today.

Aspirations. The advancement of knowledge is a slow process. We have now established a modest research base, publishing outlets, and the professional respectability required to attract more scholars into economic education research. The various "projects" of the committee—the *Journal of Economic Education*, the Test of Understanding College Economics, the sessions at the annual AEA meetings and the published papers in the *Proceedings*, the sessions sponsored at various professional society meetings, and the study of the major—have significantly encouraged the advancement of knowledge in economic education. During the next decade the CEE hopes to strengthen these activities, and attention will be focused especially on the quality of the effort.

III. The Journal of Economic Education (*JEE*)

Achievements. Founded in 1969 by the CEE and the Joint Council on Economic Education (JCEE), the *JEE* has primarily published research reports on teaching. Most of these studies have been on the principles course, almost all have involved empirical analysis, and a large share have used con-

trolled-experimental techniques to ferret out the impacts of alternative teaching technologies. Under the founding editorship of Henry Villard, the *JEE* has had notable success, measured not only by its 2,000-plus subscriptions, but also on less quantifiable dimensions: 1) it has stimulated research on economic education, and served as a notable outlet for this research; 2) it has helped establish the credibility of economic education within the economics profession; and 3) it has encouraged professionals to identify with the economic education movement.

One decade after its founding, the CEE and the JCEE undertook a retrospective review of the *JEE* to document its achievements and to explore plans for the 1980's. The result of that review was a decision to expand significantly the scope of the *JEE*. It was agreed that a strong research orientation should be maintained. But the goals of the *JEE* should be expanded to include more interests of teachers.

To organize this effort, the editorship was rotated to Donald Paden (University of Illinois). In turn, he has recruited four Associate Editors, each taking responsibility for one section of the "new" *Journal*. The new focus is conveyed by its new sections.

1) *Research in Economic Education* (William Becker, Jr., Indiana University). This section publishes original research on economic education—the evaluation of teaching methods; student learning, attitudes and interests, and teaching materials and processes. These continue as the lead sections of the *JEE*.

2) *Content Articles in Economics* (Karlman Goldberg, Bradley University). This section features articles on substantive issues, especially when the article throws light on new developments in economics, or provides an especially good example of analysis of current problems.

3) *The Teaching of Economics* (Donald Paden, University of Illinois). This section publishes articles on the teaching of economics and the teaching profession. It includes essays on great teachers, how to cope with the knowledge explosion, economic literacy, and other related issues in education.

4) *Innovation in Economic Instruction* (Karl Case, Wellesley College). This section

publishes relatively brief articles, notes, and communications, dealing with new pedagogical developments, hardware, or teaching materials, and novel ways of treating traditional subject matter.

5) *Professional Information* (Robin Bartlett, Dennison University). This section includes reports on economics enrollments, the economics major, the labor market for economists, salaries, job placements, the status of women and minorities in teaching, and related topics.

Aspirations. The ambitious goal of the new *JEE* is to become indispensable to teachers of economics. The editors welcome the support of the profession, both in readership and in providing contributions to the *JEE*. (Communications may be sent to Professor Donald W. Paden, Managing Editor, David Kinley Hall, 1407 W. Gregory Drive, Urbana, IL 60801, or to the appropriate associate editor.)

IV. Promising Projects: The Future

The activities stated above will continue to occupy a substantial part of the CEE's attention for some time to come. But a number of other ideas have been suggested and considered by the committee. We, as individuals, suggest that there are still others worth considering.

A. Use of Computers in Teaching Economics

The so-called "computer revolution," nose-diving computing costs, and the increase in student "computer literacy" suggest that computers may play a much bigger role in teaching economics tomorrow. Yet computer technology has not caught the imagination or commitment of most economic educators. We lag many other fields, notably the sciences and engineering.

Some schools have projects well along, trying out the use of computers in both undergraduate micro- and macroeconomics courses. Several schools have used simple-to-complex macro policy games. A scattering of individuals have done some interesting work in the micro areas—but only a scattering.

The CEE tentatively proposes to bring together a small study group of "experts" that will provide a report on the key teaching areas where the computer promises productive use, and perhaps those where it does not look very hopeful. Ways in which software needs can be effectively developed need consideration. The extent to which this development should be largely "market based" or sponsored by nonprofit institutions, especially the government, remains an open question. The committee is inclined toward primary reliance on the market, but there are serious externality problems because of the great difficulty in software developers' claiming for themselves the benefits from the use of the software. Software is often hard to protect from being reproduced. Quite possibly, the society in one way or another should take responsibility for developing some kinds of teaching and research-oriented software, much as it finances research.

Leaving aside this problem, the informal study group's job would be to explore the promise of computers in teaching economics, and to provide information to the profession on what is being done, how effectively computers have been used to date, and the outlook for the future. The study group's report would presumably be published in the *JEE*, *AER*, or *JEL*.

B. Use of Radio in Teaching Economics

Another, more established, technology that might be used more effectively to teach economics is radio, in particular, the more than 1,000 college radio stations and the Public Broadcasting System. Economics taught over TV and the radio has been used many times, including a year-long course offered in the early 1960's under the policy guidance of a committee appointed by this profession—with a regular daily listening audience over CBS and PBS of over one million persons.

Use of short radio "spots," offered by college campus broadcasting stations and possibly by PBS stations, to get across particularly intriguing and currently important points in economics, seems to several members of the committee a worthwhile possibility. One approach is the use of one- or

two-minute spots to raise interesting problems with economics, to suggest possible answers to these, and, especially, to draw in the listener on a "What would you do about it?" basis. Such topics might include both local and national issues—for example the distribution of tickets to athletic events or parking spaces, markets for college graduates, the pricing of campus food services, the impacts of inflation, and the like. Answers to the problem might or might not be suggested at the time of the program. Spot-type approaches have been used with some promise in other fields, notably law.

Such spots would be interest-arousers—a chance to stir up the public's and students' interest in more formal economics. The programs would need to be highly professional, and made with the heavy participation of experts in communication. The committee is now investigating the costs and possible usefulness of a small "pilot" experiment with such programs.

C. Learning Theory and Research as a Foundation for Teaching Economics

If we want to teach more effectively, surely one first step should be to find out what is known about human learning, the conditions under which it occurs, the different ways people acquire knowledge, and so on. Yet almost no economists lay such a foundation for teaching economics. Indeed, often the attitude toward theory and the evidence produced by psychologists and others studying human learning is indifference or a sneering one. Implicitly, we learn about teaching by crude empiricism—trying something ourselves, or perhaps listening to another economist who is alleged to be a good teacher. How much accumulated knowledge about learning is applicable to economics is not clear. But not to make any use of the research seems to some members of this committee inefficient, somewhat provincial, intellectual behavior. We urge that the gains from building a bridge between learning theorists and other experts on human learning, and economists who are interested in teaching more effectively, promise real rewards. Some of us believe this is priority research that may offer "practical" knowledge about

teaching and learning that we can use to improve our teaching.

We are, of course, aware that there is no widely accepted "general theory" of human learning. The experts in the field, however, know a great deal about the conditions under which different kinds of learning take place most effectively, and those unfavorable to learning.

Progress in learning from the experts on learning will, at best, be slow and perhaps difficult. But in the long run it will provide a firmer and deeper foundation for good teaching.

D. Increasing the Supply of Women as Teachers of Economics

It is widely agreed that the supply of women economists should be increased. Some of the reasons for the small representation of women among professional economists and in college and university teaching are well known. One striking result of numerous studies is that women do less well in undergraduate economics courses than do men who appear similar on other scores. Numerous possible causes have been advanced, but the answer is not clear. Some members think the CEE should put this question on the urgent research menu, since undergraduate performance is an important control over admission to graduate school, and thence to college-university teaching jobs.

Others argue that it is probably necessary to mount an ambitious, concerted research attack on the role of gender in economics. Why the "gender gap" in grades and in many economics jobs? They argue that understanding the gender gap is just part of the general problem of understanding the supply of men and women trained economists.

The AEA already has a major standing committee on the place of women in the profession. It is not clear just whose responsibility lies where. We want to cooperate and some members of CEE are exploring what channels of research seem most promising in this area.²

²The committee is aware that a similar case can be made for special investigation of the relative position of members of minority groups on grades and on jobs held.

E. Use of Cases in Teaching

Teaching "cases" are widely used in business, law, and other professional schools, and many other fields, including political science. The CEE generally supports leaving publication of teaching materials to commercial channels. However, the potential teaching benefits from the use of cases seem to us so large that a reasonable presumption can be stated for this committee to encourage development of such materials in economics.

There is no one simple, generally accepted definition of teaching cases. Business school cases, perhaps most widely known by economists, are usually detailed statements of a business situation, including the external environment, in which the student has to make a decision, often acting as president or some other decision-making official. Business school cases tend to be essentially exercises in management decision making, generally without the use of any formal theory. However, powerful uses can be made of cases as examples of the problems of *applying* theories to real world situations, and it is this second approach that we find most promising for economics. Or cases can be used to explore how effectively the theory's assumptions map the "real world" situation. Other uses are possible.

Many standard economics textbooks now include cases, but some of these show a limited understanding by the authors of what cases are and how they can be used effectively. Merely to clip out a news story and use it for a discussion of issues in the course is not necessarily to gain the advantages of case analysis, partly because material is often not available in the clipping to develop information needed for analysis.

F. Cooperation with Schools of Education

Most regular college and university courses in economics are taught by instructors who

Since the committee is limited by available time and funds, most of the members at least tentatively prefer going ahead with the study of the gender gap problems, not least because the data available on academic performance of women as against similarly placed men is much more complete than that on minority groups in comparison with nonminorities.

have had at least some professional training in economics. But the great majority of grade- and high-school teachers teaching economics (often in other social studies courses) have had little or no course work in economics themselves. Very few states require that social studies teachers take any courses in economics as a condition of obtaining a social studies teacher's certificate—though now over half of all states mandate the teaching of either a full course or part of a course about economics (often about the "private enterprise system") in the schools. The schools of education primarily responsible for college training of such teachers often have no economists on their faculties, and require little or no work in economics outside the school of education. The status of schools of education dropped sharply during the 1960's and 1970's, reflecting widespread criticism of the quality and lack of "toughness" of the educational programs in the schools. But interest has been shifting back toward relying on schools of education to improve the undergraduate programs received by future teachers. Thus we suggest this may be a time for serious attempts to work cooperatively with teachers and administrators in education—where having more good economics available to students could make a real difference in the quality of economics teaching received by students in the grade and high schools in the years to come. How to come to grips with the problem is not easy.

V. The Joint Council on Economic Education

Over the years the CEE has been enhanced by our association with the Joint Council on Economic Education. The JCEE is a nonprofit, nonpartisan, educational organization to encourage, improve, coordinate, and service economic education from kindergarten through college. It has a large network, including 50 state Councils, and 242 Centers operating on college and university campuses. The work of the CEE is facilitated by the fund-raising support of the JCEE, the administration and vesting of CEE foundation grants, and the staff at the

Council assigned to higher education. The JCEE staff has made large contributions to developing and carrying out CEE projects. In turn, the Council has benefited from the direct participation of CEE members in the appraisal and formulation of curricula and materials in economics for the nation's schools; and the impact of different CEE programs to increase the supply of well-trained economists teaching in the precollege and elementary college levels. This mutually supportive working relationship is of great value to both organizations.

Information about many of the joint activities of the CEE and JCEE (for example, the Teacher Training Program, and the Test of Understanding College Economics) may be obtained by writing the Director, College and University Programs, Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

VI. Conclusion

The CEE's mandate is large; our resources are limited. We invite suggestions of activities we should undertake or encourage, and comments on projects currently under way or proposed. Moreover, we actively solicit expressions of interest to participate in the projects of the Committee. We serve the American Economic Association, and are eager to be responsive to interests of our colleagues in our collective effort to advance economic education in the United States. Information on the chair and members of the committee, and on its programs, is provided annually in the committee reports section of the *American Economic Review Papers and Proceedings*.

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